**Supplementary information**

**Additional file 1: Table S1.** Summary of sequencing data quality.

**Additional file 1: Table S2.** Summary of the sequencing depth and coverage.

**Additional file 1: Table S3.** Statistics of SNP detection and annotation results.

**Additional file 2.** Information of KASP markers developed in this study.

**Additional file 3.** Genotyping of all broccoli accessions using KASP markers.

**Additional file 4.** Detailed information of the accessions clustered by Structure software.